

a half-trillion

The The Iraq Economic War Costs

*By Scott Wallsten
and Katrina Kosec*

In 2002, Lawrence Lindsey, then the director of President Bush's National Economic Council, broke with the administration's message by predicting that a war in Iraq could cost \$100 billion to \$200 billion. White House and Defense Department planners, who apparently expected the war to follow the pattern of the first Gulf War or the routing of the Taliban from Afghanistan (and thus cost roughly \$50 billion), dismissed Lindsey's figures as outrageously high. Lindsey soon left the administration – a departure almost certainly speeded by the discomfort he had caused among administration hawks. But with the Iraq war now in its fourth year, the \$100-to-200 billion range looks far too low. Taking into account many (but not all) costs, our tally is closer to a half-trillion dollars, with another half-trillion likely still to come.

While war conjures images of personal sacrifice in the name of grand, intangible societal goals, we believe that economics can and should play a role in the decision to go to (and to stay at) war.

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IRAQ WAR COSTS

Choosing to fight reflects a belief that, one way or another, the expected benefits of the conflict will exceed the expected costs – and that society’s scarce resources could not be better deployed elsewhere.

The Bush administration has taken considerable heat for neglecting costs in its pre-war calculations. However, most of the critique has focused on the budgetary impact alone. That focus is understandable: the public knows that raising taxes – or, in this case, borrowing to pay for the war – leaves less money for other uses. And, to date, Congress has allocated over \$255 billion (in 2005 dollars) to Iraq-specific war efforts (with another \$54 billion expected to be approved in May 2006). But as Warwick McKibbin (Brookings) and Andrew Stoeckel (Centre for International Economics in Australia) pointed out in a Brookings Institution working paper, “merely presenting the cost to the fiscal position as the cost of a war is a significant underestimate of the overall cost of conflict, just as changes in fiscal balances are an inappropriate measure of the possible gains from war.”

Direct costs in addition to those related to the budget include (but are not limited to) lost civilian productivity from the displacement of National Guard and Reserve troops, deaths, injuries and physical damage in Iraq caused by the war. Benefits include savings from no longer needing to enforce U.N. sanctions against Iraq – and, arguably most important, the value of freeing Iraqis from Saddam Hussein’s tyrannical rule.

While wars are never defended in purely economic terms, the tools of cost-benefit anal-

ysis can still be usefully applied to war just as they can to other policy decisions. Some of the tools may be too crude (and the data available too spotty) to reach precise conclusions. Moreover, in some cases there may be no widely accepted way to put dollar figures on a portion of the expected benefits and costs – what, for example, is the value of living in a democracy? Nonetheless, the debate about this war can be informed by estimates, even if imprecise, of its costs to society.

DIRECT ECONOMIC COSTS OF THE WAR

One of the biggest costs of U.S. involvement in Iraq – the resulting deaths and injuries – is also one of the most difficult to translate into economic terms. Death itself is a slippery value. Is the life of a billionaire, who would presumably give his or her entire fortune to avoid certain death, worth a million

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SCOTT WALLSTEN is a senior fellow at the AEI-Brookings Joint Center and a resident scholar at the American Enterprise Institute, where **KATRINA KOSEC** is a research associate.

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times more than a person with just \$1,000 to his or her name? Economists finesse the issue by inferring how much people value their own lives from their willingness to bear a statistically small risk of death – for example, by choosing not to invest the extra money in safer cars or by accepting dangerous work tasks in return for extra wages. The fact that this is not an entirely satisfactory method of calculation misses the point: even if we do not explicitly put a price tag on life, policies will implicitly do so anyway.

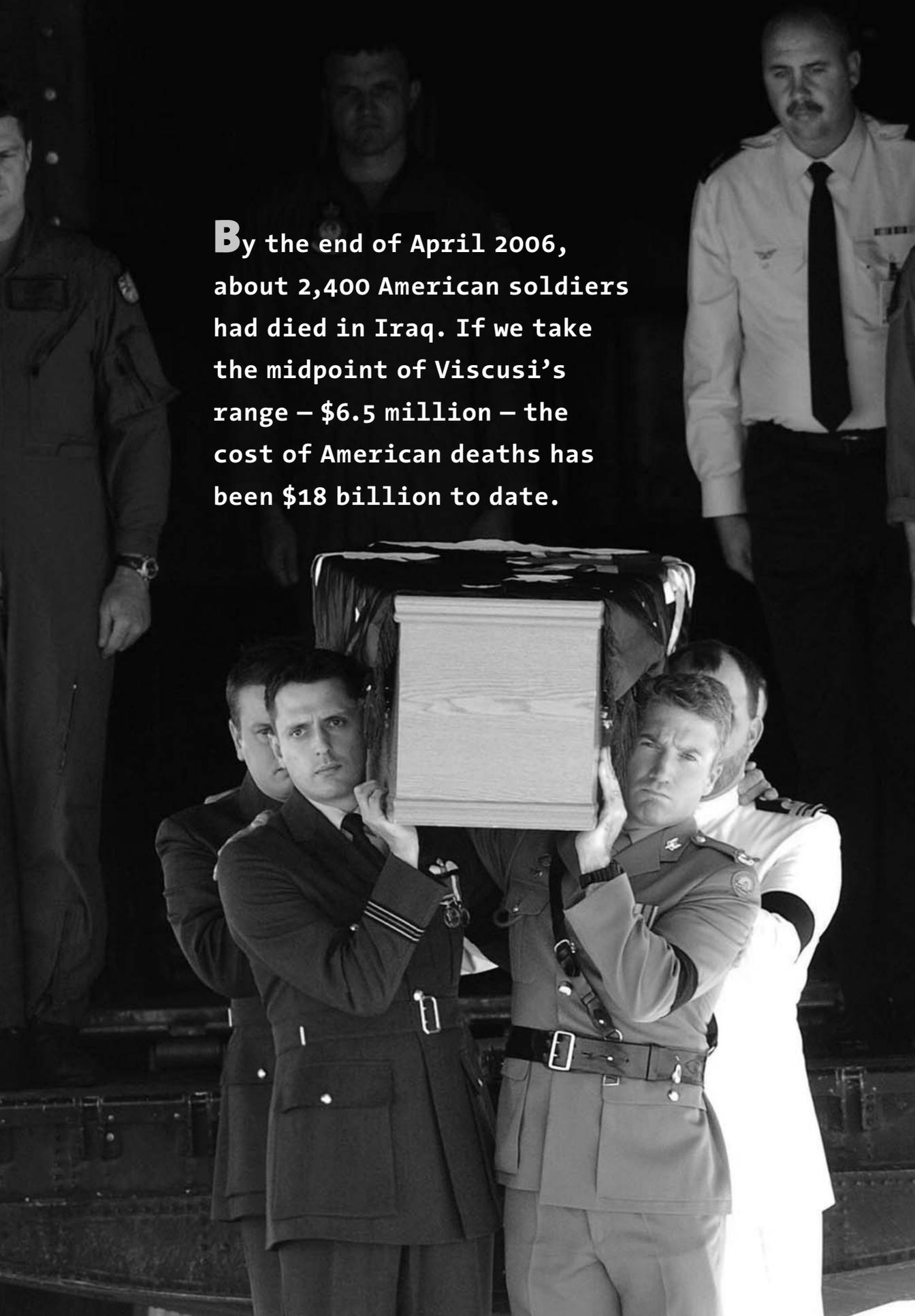
For example, if a proposed policy that will save two lives is expected to cost \$1 billion – say, by prohibiting a dangerous chemical to

leak into the water supply – and policymakers agree to it, the policy is implicitly valuing life at \$500 million. Policymakers need some way of deciding whether such a policy would be a good investment. And monetizing statistical lives by measuring how much people actually pay to reduce risks provides a plausible, explicit way of making this decision.

In a comprehensive review of research in the area, Kip Viscusi of Harvard found that estimates of the value of a statistical life (VSL) in the United States run in the \$4-to-9 million range (in 2001 dollars). By the end of April 2006, about 2,400 American soldiers had died in Iraq. If we take the midpoint of Viscusi's

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We can monetize injuries similarly. The economic cost is the net present value of the cost of treatment and future care, plus the cost of the injury to the person wounded. The loss to the wounded individual is the value of a “statistical injury,” and is inferred by measuring what people are willing to pay to reduce the risks of specific sorts of trauma. The National Highway Traffic Safety Administration and the Centers for Disease Control’s trauma research program classified injuries by their severity and calibrated them to the estimated value of a statistical life. Minor injuries count as just 0.2 percent of a life; thereafter the scale ascends through moderate (1.6

5.5 percent. Since we have a reasonable idea of income in the countries of the combatants, we can thus estimate a unique VSL for each country directly involved in the war.

According to the nonprofit Iraq Body Count Database Project (iraqbodycount.net), between 34,000 and 39,000 Iraqis had died as a result of the conflict by the end of April 2006. While any estimates are controversial, these numbers are actually quite close to the estimate of 30,000 Iraqi casualties that President Bush provided in December 2005. Using the low end of the estimated number of casualties and a VSL calibrated to Iraq’s prewar GDP per capita, the cost of Iraqi lives lost so far tops \$150 billion.

Individuals from coalition countries – soldiers and contractors – have died as well. Using the estimates from the Iraq Coalition

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percent), serious (5.8 percent), severe (19 percent) and critical (76 percent) injuries.

Using injury data from the Defense Department and widely available statistics regarding the nature of various types of injuries, we can estimate the costs to Americans injured in Iraq. With nearly 18,000 U.S. troops wounded so far, these costs add up to \$23 billion.

To monetize the value of lives in other countries, we have to stretch the research findings a bit further. Not surprisingly, the value of a statistical life is related to income; it turns out that a 10 percent change in income changes the value individuals place on life by



Casualty Count Database (icasualties.org), the cost of coalition deaths has been nearly \$1.5 billion.

IRAQ WAR COSTS

The use of military reserves creates yet another economic cost, particularly when unemployment levels are low. About 40 percent of the approximately 133,000 American troops now on active duty in Iraq are from the National Guard or Reserves, and more than 60,000 additional reserve soldiers have been mobilized to replace active-duty troops in Iraq. These erstwhile weekend warriors are thus not available to perform their civilian jobs, reducing civilian output.

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Using data from the Defense Department on Reservists' occupations and from the Labor Department on wages by occupation and industry, we estimate that displaced reservists had an average annual income of about \$33,000. Based on this information, we estimate that the cost to the economy of their lost civilian productivity is about \$4 billion per year.

AVOIDED COSTS OF THE WAR

On the other side of the ledger, the war does yield benefits in the form of avoided costs. The most easily monetized avoided costs are those associated with no longer enforcing U.N. sanctions and having Saddam Hussein behind bars rather than murdering people.

Before the war began, Steven Davis, Kevin

Murphy and Robert Topel of the University of Chicago estimated that enforcing sanctions against Iraq cost about \$13 billion annually. Having avoided that cost since the invasion began has thus yielded a savings of about \$40 billion. Davis, Murphy and Topel also estimated from a variety of sources that Saddam Hussein was responsible for killing about 10,000 people per year. That represents an avoided cost of over \$106 billion to date.

FUTURE COSTS AND BENEFITS

The costs and benefits outlined thus far are "sunk" costs and benefits – economists' equivalent of water under the bridge – and are thus not particularly useful in deciding whether the war is still worth pursuing. So what are the future costs likely to be if the U.S. remains in Iraq? While no one knows just how the war will progress, one can project some numbers from the Congressional Budget Office's estimates of likely U.S. troop strength in Iraq and CBO-predicted budget allocations through 2015.

Using a 5 percent discount rate and the same methodology, we estimate that the cost of the war from now through 2015 would be more than \$365 billion to the United States, \$55 billion to non-U.S. coalition partners and \$194 billion to Iraq, for an expected total net present value of about \$615 billion.

Against those costs are the avoided costs of not needing to enforce U.N. sanctions over the next decade (\$81 billion) and the value of the Iraqi lives spared because Saddam Hussein is no longer in power. Davis, Murphy and Topel estimated a savings of 10,000 lives annually, which are worth \$210 billion in present value terms.

WHAT DOES IT ALL MEAN?

These estimates imply a total cost of the war exceeding \$1 trillion, and it implies avoided

costs (think benefits) of more than \$400 billion. Those who care to examine the sensitivity of these estimates can change the underlying assumptions at www.aei-brookings.org/iraqcosts and see for themselves how the cost estimates change.

It is worth noting that Linda Bilmes (Harvard) and Joseph Stiglitz (Columbia) have made parallel calculations of the war's costs

oil to the war and by factoring in lost future productivity associated with the diversion of investment funds to war-related expenditures.

Our estimates also exclude certain possible benefits. By many measures, for example, the Iraqi economy is recovering from its total devastation under Saddam Hussein and U.N. sanctions. The wetlands of southern Iraq, drained by Hussein, can return to their natu-



using different assumptions that raise the estimated costs substantially. They employ a higher estimate of the lifetime cost of care for head injuries, and they include Veterans Administration costs and veteran disability payments. By the same token, they use a lower discount rate for future costs and include as a cost the interest on the money borrowed by the U.S. Treasury to finance the war. They also estimate that an additional \$1 trillion in output was lost economy-wide by attributing \$5 of the recent increase in the price of a barrel of

oil to the war and by factoring in lost future productivity associated with the diversion of investment funds to war-related expenditures. And maybe a robust democracy will emerge that will generate a large array of tangible and intangible benefits.

Clearly, our work is only a start. And hardly anyone would argue that this sort of analysis alone should be used to decide whether to go to war or when to leave it. But monetizing the costs and benefits does offer a vital perspective. Is continuing to fight with the hope of bringing democracy to Iraq worth another \$600 billion? **M**